

## PATENT COOPERATION TREATY

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## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference L2023 PCT	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/US2004/032814	International filing date (day/month/year) 06.10.2004	Priority date (day/month/year) 10.10.2003
International Patent Classification (IPC) or national classification and IPC A61F13/15, A61F13/56		
Applicant 3M INNOVATIVE PROPERTIES COMPANY et al.		
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 4 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau a total of 2 sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>		
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>		
Date of submission of the demand  09.08.2005	Date of completion of this report  24.01.2006	
Name and mailing address of the International preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer  Lanniel, G  Telephone No. +49 89 2399-2062 	

**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/US2004/032814

**Box No. 1 Basis of the report**

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements\*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

**Description, Pages**

1-14 as originally filed

**Claims, Numbers**

1-15 received on 21.12.2005 with letter of 21.12.2005

**Drawings, Sheets**

1/7-7/7 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/US2004/032814

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	1-15
	No: Claims	
Inventive step (IS)	Yes: Claims	1-15
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-15
	No: Claims	

2. Citations and explanations (Rule 70.7):

**see separate sheet**

**INTERNATIONAL PRELIMINARY  
REPORT ON PATENTABILITY  
(SEPARATE SHEET)**

International application No.

PCT/US2004/032814

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

Reference is made to the following documents:

D1: US-A-5 779 691

D2: US-A-6 142 968

Document D1, which is considered to represent the most relevant state of the art, discloses a fastening element for detachably fixing a disposable diaper in which the fastening element is fitted to a tab and comprises a fastening member having a stretchable elastic material secured to one surface of the fastening tape at least at both ends thereof, to bridge a section of the fastening tape.

Document D2 relates to extensible articles comprising an extensible fabric and an extension indicator for showing when the fabric has reached a predetermined degree of extension. The indicator comprises a plurality of loops.

The fastening element according to the invention comprises an extensible element which has an indicator printed on a face of the extensible member which printed indicator changes with the extension or contraction of the extensible member and wherein the change in the printed indicator is capable of visually showing a degree of extension or contraction of the extensible member.

This prevents from excessive or insufficient stretching of the extensible member.

# New Claims

1. A fastening element for detachably fixing a disposable diaper, in which said fastening element is fitted to a tab, an ear, or a belt, said fastening element comprises a fastening member having an extensible member, which extensible member has an indicator printed on a face of the extensible member which printed indicator changes with extension and contraction of the extensible member wherein the change in the printed indicator is capable of visually showing a degree of extension and contraction of the extensible member.
2. A fastening element according to claim 1, wherein said printed indicator comprises lines, patterns, numerals, symbols, illustrations, pictures, photographs, color charts, color codes or their combinations.
3. A fastening element according to claim 1, wherein said printed indicator is a print pattern printed at least partially to a surface of said extensible member or inside said extensible member, and said print pattern is deformable in accordance with extension and contraction of said extensible member.
4. A fastening element according to claim 1, wherein said printed indicator comprises a color chart printed at least partially to the surface of said extensible member, and said color chart comprises color regions of two or more colors that regularly change in a predetermined direction.
5. A fastening element according to claim 4, wherein said color chart is covered with a cover having a window-type opening at a substantial center of said color chart.
6. A fastening element according to claim 1, wherein said printed indicator comprises a colored porous sheet applied at least partially to the surface of said extensible member, and the color of said sheet is changeable in accordance with extension and contraction of said extensible member.

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7. A fastening element according to claim 1, wherein said fastening member and said extensible member have a unitary structure.

8. A fastening element according to claim 7, wherein said fastening member and said extensible member are unified adjacent to each other.

9. A fastening element according to claim 7, wherein said fastening member is unified with a part of said extensible member.

10. A fastening element according to claim 1, wherein said fastening member is one of the constituent members of a mechanical fastener.

11. A fastening element according to claim 1, wherein said fastening member is an adhesive tape having an adhesive layer.

12. A fastening element according to claim 1, which is fitted to a tab, an ear or a belt of a disposable diaper.

13. An article comprising said fastening element described in claim 1.

14. An article according to claim 13, which is a disposable diaper.

15. A disposable diaper according to claim 14, which is an open type disposable diaper, and said fastening element is fitted to a tab, an ear or a belt of said disposable tab.

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AMENDED SHEET